

SAFETY ALERT



Safety Alert No. 437

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Improper Fan and Other Equipment Used in Hazardous (Classified) Locations During Coiled Tubing Operations



Figure 1: See arrow for fan location



Figure 2: Fan motor with hazard sticker. The sticker reads "Do not operate this unit in explosive or flammable type atmospheres."



Recently, Bureau for Safety and Environmental Enforcement (BSEE) inspectors noticed a fan located next to a gas buster during coiled tubing operations. The inspectors looked at the fan and saw that the fan was not rated for Class 1 Division 2 location as required for the area. The fan plug had been changed to a Class 1 Division 2 rated plug, but the fan itself was still rated for an unclassified area. Also, the extension cord used to power the fan was not adequately rated for the Class 1 Division 2 area.

BSEE recommends that operators and contractors consider the following:

- Reviewing [Safety Alert 395](#) issued in September 2020.
- Reviewing the electrical hazard classification drawings as part of a hazards review when planning work.
- Before installing any new equipment, confirming it meets appropriate standards (e.g., API 500, 505, 14F, and 14FZ) for electrical hazard classification in the area where work will occur.
 - Markings should be present on the enclosures of electrical equipment and/or motors indicating that the equipment is approved for operation in hazardous (classified) locations¹ or warning against use in areas where flammable or combustible gases and vapors are present.
 - Equipment rated for Class 1 Division 2 locations are used in areas where flammable gases and vapors may sometimes be present. They should not be used in areas where flammable or combustible gases and vapors are present during normal operations. The rating required may also depend on the flammable gases present (e.g., natural gas vs. hydrogen).
 - Refer to National Electrical Code (NEC), in Article 500, for more information on hazardous (classified) locations.
 - Check enclosures, wiring, and electrical connections for damage or improper modification.

¹ A hazardous (classified) location is an area where the possibility of fire or explosion can be created by the presence of flammable or combustible gases or vapors. Electric arcs, sparks, and/or heated surfaces can be a source of ignition in such environments.

A **Safety Alert** is a tool used by BSEE to inform the offshore oil and gas industry of the circumstances surrounding a potential safety issue. It also contains recommendations that could assist avoiding potential incidents on the Outer Continental Shelf.